

PATENT SPECIFICATION

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DRAWINGS ATTACHED.

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COMPLETE SPECIFICATION.

Rollers for Use as Inking Rollers or the like on Rotary Printing Machines.

We, MASCHINENFABRIK AUGSBURG-NURNBERG AKTIENGESELLSCHAFT, a German Company, of 7, Stadtbachstrasse, 8900 Augsburg, Germany, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

10 The invention relates to the construction of roller bodies for inking, rubbing, transferring or lifting rollers and the like for printing machines.

15 The rollers known heretofore and made of thick-walled tubes have the disadvantage that, on the one hand, due to the considerable mass, they have a considerable moment of inertia, which has a very detrimental effect when the machine is braked, for example in the case of accidents, and on the other hand, they bend considerably in the case of wide machines. It has therefore already been proposed to construct such rollers as thin-walled shells mounted on a supporting axle. If in 20 this case bending is to be kept within prescribed limits, considerable diameters and small wall thicknesses are necessary. In the case of rubber-covered rollers, however, certain limits are imposed here, as well as in the choice of the diameter. In addition, very thin-walled roller shells are very flexible and prone to vibration. In the case of lift rollers consisting of thick-walled tubes, there is in addition considerable wear of 25 the device, due to the constant retardation and acceleration.

30 These disadvantages may be minimized according to the invention by the fact that the roller body includes two concentric thin tubes, the inner tube having substantially

half the diameter of the outer tube and being supported within the outer tube by wet plates some of which are arranged perpendicularly to the axis and some of which are arranged parallel to the axis, the wet plates 45 having slots for inter-engagement.

By means of such a step, the rollers may be constructed with slight bending, short starting and braking times and vibration-free. 50

A constructional example of the invention is represented in the drawing, in which

Figure 1 shows a side view of a roller according to the invention, partly in section,

Figure 2 shows a section on the line II—II of Fig. 1. 55

The roller according to the invention comprises a thin-walled outer tube 1 and a concentric inner tube 2 of substantially half the diameter, between which rollers web plates 60 3, 4 are arranged, the former at right angles to the axis and the latter extending substantially parallel to the axis, and running the entire length of the roller body. The web plates have slots 5 up to about half the width 65 so that the separate parts can be connected together by insertion one within the other at the slotted places. The web plates are connected to the outer and inner shells of the two tubes 1, 2 by welding, soldering or 70 gluing. The web plates may be formed of cardboard, light metal or the like or be of honeycomb form. The end closure of a roller is formed by two hollow roller stubs 6, which are inserted in the inner tube and are also connected to the outer tube in a 75 suitable manner.

The invention is not restricted to the constructional example described in the foregoing. 80

WHAT WE CLAIM IS:—

1. Ink roller or the like for a printing machine including two concentric thin tubes, the inner tube having substantially half the diameter of the outer tube and being supported within the outer tube by web plates some of which are arranged perpendicularly to the axis and some of which are arranged parallel to the axis, the web plates having slots for inter-engagement.
2. Ink roller according to claim 1, wherein the web plates are welded to the inner and outer tube shells in places.
3. Ink roller according to claim 1, wherein the web plates consist of cardboard, light metal or the like or are of honeycomb form, and are connected to the tube shells by gluing or soldering.
4. Ink roller according to claim 1, wherein hollow shaft stubs, engaging in the inner tube, are secured to the ends of the roller body.
5. Ink roller substantially as hereinbefore described with reference to the accompanying drawing.

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COMPLETE SPECIFICATION

1 SHEET

*This drawing is a reproduction of
the Original on a reduced scale*

